

REMARKS

Upon entry of this amendment, independent claim 21 with dependent claims 22-29, and independent claim 32 with dependent claims 33-43 will be present in the application.

Claims 21-29 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description. Claim 21 has been amended to recite that "the length of the first flow of process air being smaller than the width of the first flow of process air". Claim 1 as originally filed recites "a first flow of process air is formed, with a cross section extending essentially across the whole width of the web-formed material and the extent of which along the direction of movement of the web-formed material is essentially smaller than its extent perpendicular to the direction of movement of the web-formed material, with a direction of flow essentially perpendicular to the surface of the web-formed material". Accordingly, the amendment conforms claim 21 to claim 1 and does not introduce new matter.

Claims 21-30 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. 6,735,882 (Takahashi) in view of U.S. 5,967,770 (Heine et al.) and claim 31 was rejected under 35 U.S.C. § 103(a) as being obvious over Takahashi in view of Heine and further in view of U.S. 4,133,636 (Flynn). Claims 30 and 31 were also rejected under 35 U.S.C. § 103(a) as being obvious over Flynn in view of Heine. Claims 30 and 31 have been canceled, so the rejection of such claims is moot.

With regard to claims 21-29, the Office Action contends that Takahashi discloses "blowing a hot process air ... against the web-formed material and drawing the processing air through the web-formed material to dry said material". While it is true that Takahashi teaches that "the dry air from the supply system 16 is blown on the web 12 via the nozzles 20." Col. 3, lines 54-56. There is simply no basis for the Office Actions allegation that the processing air is drawn through the web-formed material to dry the material. Takahashi specifically teaches that blowing the dry air on the web "causes the organic solvent in the coating liquid applied on the web 12 to evaporate and dry." Col. 3, lines 56-57. In other words, it is the direct impingement of the hot air on the liquid coating that causes the liquid to evaporate. As further taught by Takahashi, "[i]n FIG. 1, the nozzles 20 are placed above the web 12, but not limited to this, may be provided both above and below the web 12."

Col. 3, lines 57-60. Finally, the Takahashi apparatus produces magnetic recording medium composed of a polyethylene terephthalate web to which a magnetic coating liquid is applied, with the liquid component of the magnetic coating liquid being evaporated by the dry air. A person of ordinary skill in the art would know that the base material used for magnetic recording medium is a thin solid film that is impermeable to the flow of air.

In addition, although the Office Action alleges that Takahashi discloses "the distribution member forming a first flow of process air having a width extending substantially across the width of the web-formed 12", there is absolutely no support for such contention. All of the drawings of the Takahashi reference show only the longitudinal extension of the drying chambers in the direction of travel of the web. Accordingly, it cannot be argued that any of the drawings disclose distribution of the process air across the width of the web. The Takahashi specification does not provide any information regarding the distribution of the process air across the width of the web, and it cannot be argued that Takahashi inherently teaches distributing the process air across the width of the web. "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." MPEP § 2112. "The mere fact that a certain thing may result from a given set of circumstances is not sufficient [to establish inherency]." In re Rijckaert, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). Further, claim 21 recites that "the length of the first flow of process air being smaller than the width of the first flow of process air". Clearly, there is nothing in Takahashi that can be construed as disclosing this feature of the subject invention.

Further, Takahashi does not disclose "mixing water leaving the web-formed material with the process air, discharging a first portion of the mixed water and process air as exhaust air 29 and replacing the exhaust air with a corresponding portion of supply air 22 with a low water content, [and] recirculating a second portion of the mixed water and process air 28", as alleged in the Office Action. The word "water" does not appear anywhere in the Takahashi specification. The coating liquid disclosed in Takahashi includes ferromagnetic metal fine powder, vinyl chloride-vinyl acetate copolymer, polyester polyurethane resin, carbon black, butyl stearate, stearic acid, methyl ethyl ketone, cyclohexane, and toluene (Table 1), but no water.

The combination proposed by the Office Action will not produce the method recited in claims 21-29. Accordingly, the rejection of claims 21-29 as being obvious must be withdrawn.

Claims 32-43 were rejected under 35 U.S.C. § 103(a) as being obvious over Heine in view of U.S. 4,253,247 (Bergstrom), the Office Action contending that gratings or perforated plates of Heine is equivalent to the pressure-drop generating member recited in claim 32. However, claim 32 also recites that the pressure-drop generating member is “disposed proximate to the high-pressure side of the web-formed material”. As is illustrated in both Figure 1 and 2, the perforated plates of Heine are located at a distance from the high-pressure side of the web-formed material, with tubes 10, 11 and 12 being disposed between the perforated plates and the web-formed material. Heine teaches that the spacing between the perforated plate, tubes 10, 11 and 12, and the web-formed material allow for proper measurement of flow, temperature and pressure with flow velocity, temperature and gas pressure sensors located in tubes 10, 11 and 12, respectively. Accordingly, Heine teaches away from locating the perforated plates proximate to the high-pressure side of the web-formed material.

The Office Action also contends that Heine discloses “a chamber ... surrounding the at least one fan 27 and having an opening ... which are arranged same as claimed.” However, claim 32 recites that the chamber surrounding the at least one fan extends “substantially across the width of the web-formed material” and that the chamber has “a limiting surface substantially parallel to the surface of the web-formed material, the limiting surface having an opening extending substantially across the width of the web-formed material”. There is nothing in Heine that discloses such structure. Similar to the Takahashi reference, all of the drawings of the Heine reference show only the longitudinal extension of the drying chambers in the direction of travel of the web. Accordingly, it cannot be argued that any of the drawings disclose a fan chamber that extends across the width of the web-formed material. The Heine specification does not provide any information regarding the width of the fan chamber, and it cannot be argued that Heine inherently teaches the chamber of claim 32.

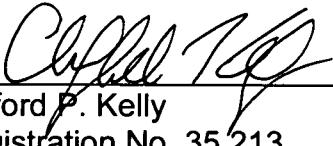
Claims 32-43 were also rejected under 35 U.S.C. § 103(a) as being obvious over U.S. 5,337,586 (Ronchi) in view of Bergstrom, the Office Action contending that Ronchi

discloses "a chamber ... surrounding the at least one fan 19 and having an opening (at 21) which are arranged same as claimed." However, Ronchi suffers from the same deficiency as Heine. Claim 32 recites that the chamber surrounding the at least one fan extends "substantially across the width of the web-formed material" and that the chamber has "a limiting surface substantially parallel to the surface of the web-formed material, the limiting surface having an opening extending substantially across the width of the web-formed material". As shown in Figure 3, cited in the Office Action, multiple fans are required to span the width of the web-formed material of Ronchi. Since no single fan has the chamber recited in claim 32, Ronchi does not include all of the elements alleged in the Office Action and the combination suggested by the Office Action will not produce the apparatus recited in the subject claims.

The various dependent claims add additional features to the independent claims, and are therefore believed to be allowable. Also, the dependent claims are believed patentably distinct on their own merits as being directed to combinations not suggested by the references.

In view of the above-directed amendments and the proceeding remarks, prompt and favorable reconsideration is respectfully requested.

Respectfully submitted,
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